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VOL. III., NO. 51

1888

MARCH 14

PUBLISHED EXCLUSIVELY IN THE INTERESTS OF THE HONEY PRODUCER

THE CANADIAN



JOURNAL

THE FIRST \$ WEEKLY IN THE WORLD

ONE DOLLAR PER YEAR

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BEETON ONT.

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- PRODUCTION OF COMB HONEY, by W Z Hutchinson. Paper, price, 25c.
- THE HIVE AND HONEY BEE, by Rev. L. L. Langstroth. Price, in cloth, \$2.00.
- A BIRD'S-EYE VIEW OF BEE-KEEPING, by Rev. W. F. Clarke. Price 25c
- FOUL BROOD, ITS MANAGEMENT AND CURE by D. A. Jones. Price, 11c. by mail; 10c. otherwise.
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- BEEKEEPERS' GUIDE OR MANUAL OF THE APIARY, by Prof. A. J. Cook. Price, in cloth, \$1.25.
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American Currency, stamps, Post Office orders, and New York and Chicago (par) drafts accepted at par in payment of subscription and advertising accounts.

ERRORS. — We make them: so does every one, and we will cheerfully correct them if you write us. Try to write us good naturedly, but if you cannot, then write to us any way. Do not complain to any one else or let it pass. We want an early opportunity to make right any injustice we may do.

We can supply Binders for the JOURNAL 55 cents each, post paid, with name printed on the back in Gold letters.

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"Bee-Keeper's Guide," monthly..... 1.40

"Rays of Light"..... 1.20

"The Bee-Hive"..... 1.25

"Beekeepers' Review"..... 1.40

"Beekeepers' Advance"..... 1.20

TO CONTRIBUTORS

Communications on any subject of interest to the Bee-keeping fraternity are always welcome, and are solicited.

Beginners will find our Query Department of much value. All questions will be answered by thorough practical men. Questions solicited.

When sending in anything intended for the JOURNAL do not mix it up with a business communication. Use different sheets of paper. Both may, however be enclosed in the same envelope.

Reports from subscribers are always welcome. They assist greatly in making the JOURNAL interesting. If any particular system of management has contributed to your success, and you are willing that your neighbors should know it, tell them through the medium of the JOURNAL

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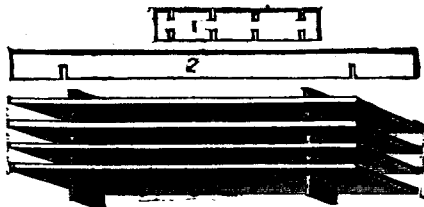
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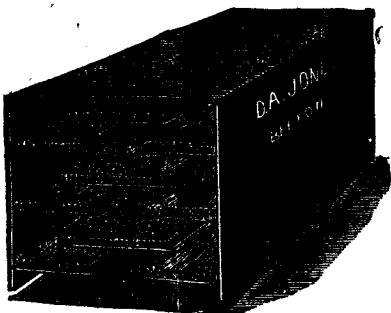
## IMPROVED CANADIAN FEEDER.

This is the Feeder spoken of on page 610 of Vol. III of the CANADIAN BEE JOURNAL. It is arranged with the float as shown in the engraving below. Holds 12 to 15 pounds of feed, and



may be divided making two feeders if needed. The price is 50c. each, made up; per 25, \$10.00. In flat each 40c.; per 25, \$8.75.

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For feeding in winter, or at any time when the weather is too cold to admit of feeding liquids.

Price each, made up.....\$0 30  
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These are placed above the cluster, filled with candy which is made by taking pulverized or granulated sugar, and stirring it into honey nicely warmed up, until the latter will not hold any more in solution. Allow the mass to stand till both are thoroughly mixed. Then place in Feeders and set over frames, packing around nicely to keep in the heat.

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**RUNS EASY**

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**BEES** ITALIAN BEES and Queens, 3 frames nuclei, full colonies at the very lowest rates and safe delivery guaranteed. Send for catalogue to E. T. Flanagan, Belleville, Ill.

## BEESWAX WANTED

Will pay 30 cents in cash or 33 cents in trade for any quantity of pure Beeswax.  
 Comb Foundation for sale, to suit any size frame or section. Wax worked on shares or for cash. All freight to Campbellville station C.P.R. If by mail to  
**ABNER PICKET,**  
 Nassagawaya P.O., Ont.  
 Agent for D. A. Jones Co.'s supplies.

### THE BEE-KEEPERS'

# REVIEW.

For February is now out. (It has been delayed by the serious illness of its Editor.) The special topic of this number is, "Temperature" as applied to Bee Repositories. So much information upon this topic has probably never before been gathered together into so small a space. The treatment is exhaustive, and it would seem that nothing more need be said upon the subject.

Among the contributors to this number are such men as R. S. Taylor James Heddon, H. R. Bowdman, T. F. Bingham, J. H. Martin, J. A. Buchanan, and C. C. Miller.

Several pages are devoted to Editorials on a variety of live topics. There are also choice extracts from the writings of Prof. Cook, C. W. Dayton, C. C. Miller and others.

A detailed list of contents will not be published, as a copy will be cheerfully sent to all who ask for it. Price of the REVIEW 50 cents a year.

### THE PRODUCTION OF COMB HONEY.

A neat little book of 45 pages, price 25 cents. The REVIEW and this book for 65 cents. Stamps taken either U.S. or Canadian. Address  
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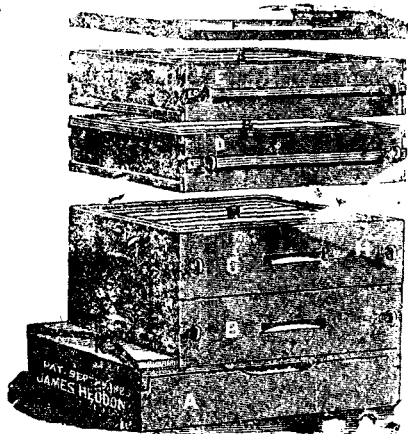
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We are the owners of the patent on this hive in Canada, and we are in a position to make and sell the hive gotten up in any shape to suit the purchaser—either in flat or nailed up.

A complete working hive consists of bottom-stand, bottom-board, entrance-blocks, two brood-cases, one honey-board, two surplus cases (in good seasons we often use three surplus cases on the hive at one time) and cover. So that if you order these hives in the flat this is just what will be sent you.

Sample hives we make with the brood-frames wired and the surplus cases supplied with fifty-six 4 1/4 x 4 1/4 7 to the foot sections.

In quoting prices of brood-cases and surplus cases, the set-screws, brood-frames and wide frames with their tin separators are always included, both in flat and made up. We quote the prices of sample hives made up, and of the various parts made up, so that

should there be any portions of the hive you do not wish you can easily ascertain what deductions to make.

Sample hive, made up.....\$2 90  
Add ten per cent if you wish the hive painted.

PRICES OF PARTS.

	made up flat.
Bottom stand.....	12 09
Bottom-boards.....	15 11
Entrance blocks (two).....	03 08
Brood case, invertible, including set screws and frames wired when made up or punched for wiring in flat.....	60 45
Honey Board (wooden) slotted, invertible.....	10 07
Honey board, metal and wood, invertible	30 25
Surplus case, invertible, including wide frames and separators.....	60 50
Cover, half bee-space.....	15 12
Sections, full set of 28 in flat.....	15 15
Tin Separators, seven to each.....	10 10

The cost of one hive such as you would receive, in the flat, would therefore be (without honey boards of either description) \$2.35. Add the cost of whichever style of honey-board you prefer, and you get it exactly. If you do not designate either we shall always include the wooden-slotted one.

DISCOUNTS IN QUANTITIES.

For 5 hives or more, 5 per cent.; 10 or more, 7 1/2 per cent.; 25 or more, 10 per cent.; 50 or more, 15 per cent. These discounts are off the prices quoted above, either nailed or in flat.

INDIVIDUAL RIGHTS.

We will sell individual rights to make for one's own use, and to use the new hive or any of the special features of Mr. Heddon's invention at \$5. We do not press the sale of these rights, believing that the hives cannot be made to good advantage by anyone not having the proper appliances. We will sell however to those who wish to buy, and for the convenience of such we append a list of prices of what we would likely be called upon to furnish in any event:—

Woodscrews per 100, boiled in tallow.....	\$1 25
Tap bits for cutting threads.....	1 50
Tin Separators, per 100 proper width.....	1 50
Brood Frames per 100.....	1 25
Wide " " ".....	1 50

### 'Practical Hints to Bee Keepers'

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American Apiculturist.

Wenham, Mass., U.S.

## Have You Seen It?

THE

### BEE-KEEPERS' ADVANCE

—AND—

#### POULTRYMEN'S JOURNAL.

Only 25 cents per year, sample copy free. Address

J. B. MASON.

McFall's, Maine.



"THE GREATEST POSSIBLE GOOD TO THE GREATEST POSSIBLE NUMBER."

VOL. III. No. 51 BEETON, ONT., MARCH 14, 1888. WHOLE No. 155

EDITORIAL.

THE first association to affiliate with the Provincial Bee-keepers' Association is the Brant. Who will be next? What do the bee-keepers of Simcoe think of forming a county association to be affiliated with the parent society. We have lots of good bee-keepers, and we should be glad to hear their views.

The latest number of *Gleanings* received has in it a call from a lady, for some one to compose a good song on "bees" which can be set to music, and played and sung as our International (bee) Anthem. She suggests Rev. W. F. Clarke for the composition of the words and Dr. C. C. Miller for the musical portion of the task. Come, now! let these two worthies give up their "hibernation" discussion and get down to work on this very laudable enterprise.

"Woman" is the name of the latest literary production of New York, of which the "advance" sheets of the third number are now on our table. It contains a number of literary gems, and is well worth obtaining by any one interested in works of philanthropy. It can be had of *The Woman Publishing Co.*, New York.

Our new catalogues and price lists will be on their way to our customers before this issue of the CANADIAN BEE

JOURNAL is ready for the mail. It will be found more replete than ever, and prices will be found very low, everything being taken into consideration.

We have received a letter from W. Z. Hutchinson, dated the 6th inst., in which he says that he has been out again that day for the first time since his illness. The *Review* will, therefore, be along in a day or two.

For the Canadian Bee Journal.

HIBERNATION--STING-TROWEL.

BEFORE saying anything else, I want to apologize for not looking up what Prof. Cook said some 13 years ago, for on page 83 of *A.B.J.* for 1875 he uses language which certainly may be understood as favoring the hibernation theory. As to anything further, if Mr. Clarke can see evidence that there is progress in the hibernation theory idea as a new thing, I can only say that to me the progress looks all the other way, and perhaps it may be as well to let it go at that. If anything useful can ever be gotten (has anything yet been gotten?) from Mr. Clarke's idea that shall help us in wintering, I shall be one of the first to acknowledge it, and I don't know that any great harm can come from Mr. Clarke's thinking as he does. Still I can't think his treatment of Prof. Cook such as he (Mr. Clarke) would desire.

With regard to the sting-trowel business, however, I do feel that there is always danger of harm in putting forth as positive fact that which is without foundation, especially if put forth by so prominent a writer as Mr. Clarke. Mr. Clarke

should remember that additional weight is given, and of right ought to be given in the estimation of the public to what he may say, by the title attached to his name, and should not give forth as fact that of which, I think, no further proof has been given than this one sentence of Mr. Clarke's: "I can only say that in watching the bees when capping honey, I have been led to the conclusion that the sting and its accessories, especially the little brushes, one on each side of the dart, are used in the finishing-off process." Now, friend Clarke, can't you tell us what led you to that conclusion? May I ask you did you ever see the bees use their stings in fashioning the wax? You say, "I cannot remember any proof having been adduced against it." Surely, the burden of proof ought to fall on you, but I think there is some proof against you. I think many witnesses can be summoned who have watched the bees capping honey, and if they saw the work going on and never saw a sting used in the process, is not that pretty good proof that a sting is never thus used? Will the bee-keepers who have watched bees working wax please tell us what has been their observation in this regard. For myself, I never saw the sting used when watching bees working wax. Mr. Editor, what has been your observation?

If Mr. Clarke had put forth his theory as mere theory or supposition it would have been quite another thing. He speaks, however, on page 48 of his book, with no supposition in the matter at all, but says in a very positive manner that the sting is that

....."which by them employed so much is,  
In giving honey comb its final touches."

In his notes he also says "the sting is really an exquisitely contrived little trowel with which the bee finishes off and seals the cells." No "if" or "perhaps" about it, you see. Now, friend Clarke, whatever peculiar circumstances may have combined to make such a belief in you, I don't believe that the statements just quoted are true. I further believe that it is never harmless to propagate error for truth, and therefore, not without reluctance have I spoken.

C. C. MILLER.

Marengo, Ill., March 5, 1888.

For the Canadian Bee Journal.

### HIBERNATION.

THE article on page 991, etc., Feb. 29th, C.B.J., on Dr. Miller's criticism, shows the humorous side of Bro. Clarke "to a T." Now, I would like to ask what there is in his "hibernation theory" that should cause such severe criticism as has been made? Bro. Clarke has simply stated a theory; not in an aggressive manner, but simply as his view of a

matter of importance. Why should he be abused so soundly therefore? Bro. Clarke needs no defence from anyone, he is amply able to take care of himself, but so far as his theory is concerned, I for one am fully in harmony with his views, and I defy anyone to prove that a single point offered by him is incorrect. I know that perfect rest and quiet conduces to safe wintering of bees. I know, too, that bees while they do not hibernate like wood-chucks, do assume a dormant state, and think the word hibernation is flexible enough to denote that state of dormancy. This as I understand the matter, is all that Bro. C. has ever claimed, and I have never seen that Prof. Cook has assumed anything different; but even suppose he should? Will that add to or take from the fact? That Prof. Cook is an able entomologist is true, but does that make him a perfect judge in a matter of pure theory? My own opinion is if more tests were made, and actual results given, and less theoretical nonsense written, the science of bee-keeping would be driven forward with rapidity. As it now is the outside world says: "Bee-keeping is not a science, else its ablest exponents would not be so constantly engaged in fighting over non essentials."

J. E. POND.

North Attleboro, Mass., March 3, '88.

For the Canadian Bee Journal.

### "CRITIC ON THE PATH."

IF the editor, Allan Pringle, and the readers of the C.B.J. will turn to page 914, Feb. 1, and again read my article headed "A New Enemy" and then compare it with the strictures on 990, Feb. 29, they will see what an injustice is done me by an unfriendly attack, a quibbling, begging-the-question attempt to laud one's self before the public as a *tutor et ultor*.

I am called upon to stand by my colors, also to put upon record my views. I will gladly do so, now that I have crushed the first attempt to introduce into our midst that which would eventually be a serious "enemy" to the honey producer. I will now, with the editor's kind permission, deny some of the assertions charged in the "enemy's" gun.

I never considered that everybody's dabbling in bees was going to increase the amount of honey to over-production. I believe it would have an entirely different effect. It would obstruct the specialist, keep capitalists from embarking in it, throw on the local market poor and unsaleable shaped goods and kill the business as an industry. I never objected to the "live and let live" policy, I have ever been its champion. But acknowledging bee-keeping to have develop-

ed into an important industry, having formed societies throughout the land to promote its interests, and Canada having asked and accepted Government aid, I most decidedly object to the principle of inducing the masses to take it up on the principle as explained by Mr. Cowan at Toronto, and practiced by the B.B.K.A.

I never was *afraid* to put my name to any theory, assertion, or suggestion, where it was necessary or of value. My motive in writing that letter under a cognomen was, that a series of criticisms I might make for the benefit of my brother bee-keepers would naturally open up considerable private correspondence, questions, etc., which would be better asked through the JOURNAL, and not tax me with either the time, labor or expense that would ensue. Having retired from all business, after twenty years' journalistic experience, I know full well what being taxed is, and also what is the custom.

I never accused Mr. Pringle of advising "Tom, Dick and Harry," and he admits he has never done so. I do not deny any man the right to keep bees; I like to see them take to it, but I do not think it right or wise to induce every one to go into it to the damage of others who are making it their living, or part of their living. I would inform Mr. Pringle that I also own and work probably a larger farm than him, containing more departments, and claim the right to add one or more at any time. But I do not think it wise or just to go round putting myself out of the way to induce every bee-keeper to make his own foundation and sections, because that would drive the dealer out of business, and nice looking stuff we would have to offer for sale in two years' time. No, Mr. P., you must learn to read English, to agree according to Isaac Watt, study up Lord Kaines' elements of criticism. Run your farm for all it is worth.

You say: "I reiterate and re-affirm that the farmer has not only the moral right, but the economic, social, legal and every other right to keep bees and I have the right to say so and will say so over my own name." So do I.

Therefore, resolved that while it is the inalienable right of everybody and anybody to go into bee-keeping the same as any other honest pursuit, it is the sense of all honest men that it is unwise and unfair to *urge* everybody and anybody to take it up to the injury of the industry and to those who have to support their families thereby.

CHAS. PENTON.

E. Aurora, Erie Co., N.Y., March 5, 1888.

Observe our special offer of sections, in large lots, as given in our advt. columns.

For the Canadian Bee Journal

### Those Bee-Glands and Evolution.

**H**AVE read Mrs. Chaddock's letter in the last *Journal* with much interest, and am pleased to know that she really does accept the principle of evolution no less than Prof. Cook and myself—if not more so. But Mrs. Chaddock must pardon me (i.e., if I am wrong) for interpreting this confession of faith on her part as *ironical*, because the positions she takes cannot be reconciled with the facts and philosophy of evolution. But the ladies must have their own way sometimes for

"When they will, they will and you may depend on it, And when they won't they won't and that's the end on't."

To argue against prejudices is usually a waste of time. I once heard an Irishman and a Scotchman arguing politics—one a grit and the other a tory. Said the Irishman, "If you will only keep aisy, Sandy, and listen till what I'm sayin' I'll convince you that I'm right," to which Sandy replied, "Indeed, gin ye did convince me, I'd no believe it."

Now, that is just about the size of the whole matter. When a man is not open to conviction (and much more so a woman) he will either not be convinced or not believe the unpalatable truth when he is convinced. Under the circumstances I feel like letting Mrs. Chaddock have pretty much her own way, especially as she appears to be able not only to set Prof. Cook right on these abstruse scientific questions, but even Charles Darwin himself, and "all the scientific men of our age." I give it up.

But my dear Mrs. Chaddock, seriously and confidentially, you might as well take it easy and possess your soul in patience, for I can assure you that this most obnoxious and naughty doctrine of evolution has come to stay; and nothing that you can say—nothing that I can say—will stir it any more than we can stir the planet Jupiter or the "everlasting hills." I leave Prof. Cook and yourself to settle the hash between you. When you read his last letter on this subject in this week's *A.B.J.*, which has just reached me, you will see that you have considerable work before you, especially on the snake question.

Mrs. Chaddock says she knows all about snakes—all she wants to know—from Genesis; that his snakeship was doomed to "crawl on the ground and eat dirt as long as he lives," and that anyway the "varmint" never had legs to stand on. Now, such a diet as that above-mentioned would not, I should say, be very wholesome or palatable, but it would have the advantage of being "*dirt* cheap." Many a time when I was a boy "making hay" in the fields have I



seen a snake swallowing a frog, or chasing one through the grass for all he was worth in order to get the *swallow* on him and make a meal of him. And this was at times and in places where there was "dirt" in plenty all around. But for a good, square, toothsome (no, *toothless*) meal, says the snake, "give me the frog everytime."

So much for the snake's victuals; as for his lost legs, as already intimated, Mrs. C. must settle that with Prof. Cook, *et alii*.

In my other letter on this subject in C.B.J., page 933, I noted the fact that some snakes (the boa-constrictor, for instance) have "little bones under the skin toward the tail, which have no present use as they are the remains of hind legs and a pelvis." To this my fair opponent warmly replies that no man need tell her that "snakes used to walk on legs." But in the letter before me in *A.B.J.*, page 151, Prof. Cook uses the following language:—"The strongest argument as to snakes' legs comes from the study of fossils. Snakes, like animals, are found with legs. Snakes are very late to appear in the rocks. Though they are the lowest of reptiles, yet they were the last of all reptiles to appear, as geology clearly shows. The loss of their legs is a case of retrograde development."

"I thank thee, Jew, for that admission," but what will our fair polemic say to it? I leave the Professor to her tender mercies, and I know she will treat him gently for has he not set her a conspicuous example in that line?

And now a word to friend Cook, who says I misjudged him in thinking he backed down out of courtesy to his lady critic. Well, I certainly got that impression from his letter, and am now glad to hear that I was mistaken, and that he thinks evolution stands firmly on the platform of truth, and needs no evasion or special pleading to hold it up. But the Professor "does not relish being reviewed in another paper." Here, I admit, he has cause of complaint, and an explanation is due from me, which I fully expected to give the first opportunity, and shall now give here. The contributors to the *A.B.J.* will know that their contributions to that journal are not infrequently cut down and sometimes quite emasculated. Mine were treated in this manner two or three times, and I do not relish the business any more than Prof. Cook relishes "being reviewed in another paper." I freely admit that friend Newman has the right as an editor to do this, but then I also have the right to avoid the infringement. Under these circumstances the Prof. will pardon me for what appeared, without this explanation, as a discourtesy.

ALLEN PRINGLE.

Selby, Ont., March, 10, '88.

FOR THE CANADIAN BEE JOURNAL.

### Clarifying Honey or Improving it In Appearance.

I WAS sorry to see that Canadian bee-keepers did not have such a good season as they generally have had, but if they had had much surplus, I fear they would have been disappointed in the price they would have got, had they sent any to England, as it would not have been like it was at the Colonial Exhibition. We had, during June last year, for three weeks, an exceedingly good honey flow. What it might have been if we could have had a good soaking rain for a day or two, at end of the month, it is difficult to imagine, as it was I had about 1000 1 lb. sections and 5 cwt. of extracted, the finest and thickest honey I have had since 1881. O, by the bye, friend Jones, when I saw you at the Colonial you said you were going to put an article in the C.B.J. on clarifying extracted honey, etc., which I should be glad to see.

JOHN WALTON.

Leamington, Eng., Feb. 13, '88.

When honey has got pollen in it, as it sometimes has when extracted from combs where the pollen has not been thoroughly packed by the bees, the little loaves which are removed from the bees' legs come out from the cells very easily. After they are packed down by the bees it requires a very strong centrifugal force to remove it. If this pollen is mixed up with the honey it is apt to change the flavor and also the color of the honey. It is a very common practice either to have strainers of wire cloth in the bottom of the extractor, or cloth tied over the can or receptacle in which the honey is poured. The latter plan we much prefer to the wire cloth. We generally use cheese cloth—not the kind that is used around cheese to keep them in shape, but material of a finer quality, woven very loosely, which makes it more like a very fine wire cloth. This tied over the top of an ordinary ripening can, and allowed to sag a little in the centre, forms a very good strainer for honey, as it is drawn from the extractor. Any bits of capping, pollen, etc., are retained by the strainer, while the honey passes into the can, but we have discovered that honey can be more improved by a process which some call clarifying, done as follows:—Take a large bag that will hold 100 to 200 lbs., have it tightly fastened to a frame made of four pieces sufficiently strong to bear

the weight of honey; two of the pieces have ends projecting so that a cord from each of the corners to the ceiling will support it. The honey may be poured in the top and a vessel placed below to catch it. This should be kept in a warm room where the temperature is about 70° or more. The bag should be made of a filtering material such as is used to filter oil.

From the Western Farmer.

### EXTRACTED HONEY.

I AM asked to give some thoughts on how to get the best extracted honey. We must have a location well supplied with the best honey-producing flowers, which, in my location, is, first, white clover, and then basswood timber. But there is nothing here that equals the white clover honey. It is important to get as much of that as possible, in its best condition. In order to do this we must have everything ready that may be wanted, so that there may be no time lost by the bees. We want plenty of good, clean combs for the bees to store their honey in. But before we can get the best clover honey we must see to it that the dark honey that is in the combs through the winter, and what is gathered in the spring time from dandelions and fruit bloom, etc., which is dark, is all emptied out of the combs, so that it will not be mixed with our nice white clover.

Just as soon as our bees commence on the white clover, and are making a living, then we commence to extract, and whirl out all the honey we can get; extract every comb in the hive that has the least bit of dark honey in it, as a very little of this dark honey will stain or darken a whole barrel of white honey. The cleaner we get out this first extracting, the whiter the second extracting will be. This first extracting with us is dark, and is usually sold to the cracker factories for about two cents less than the best honey. Now, if the weather is not too wet, in a week's time after we extract the first time, we can extract again. But if we are having wet weather, we must wait two or three days longer for the honey to get thick and ripe. But unless the weather is very wet, we get good thick honey and extract once a week. Do the best we can when we take out the first extracting, there will be enough of the dark honey left in the combs to darken the second extracting considerably. The second extracting usually sells for about one cent less on a pound than the best honey.

In good average seasons we extract four or five times, depending somewhat on the weather as to moisture. If the weather is dry, and yet

moist enough to favor a good honey flow, the honey will be first rate, if taken out as often as once a week. In wet weather it is best to wait ten or twelve days, or long enough for the honey to get thick and ripe. If two-thirds is capped over, the honey is all right; don't wait any longer. Our third extracting is the best quality, and is strictly white clover, and should bring in market the highest price. The fourth extracting is as good as the third, if we get it all out before the basswood blossoms open; still I can usually sell mixed clover and basswood at the same price as clear clover. The basswood usually begins to blossom before we get all of the fourth extracting out; so that the fifth extracting with us is pure basswood honey. We have some customers who like the flavor of the basswood honey the best.

It is important to have each grade kept by itself. The way we do it is to put it in barrels, take the barrels with us to our different apiaries, enough to hold the day's work. We can guess very closely how much storage room we want. We extract one whole apiary in a day, getting in the best of the season 2,000 lbs. and upwards of honey. We haul the honey home and put it in our store-house; then tack on the head of each barrel a card, on which we mark the date, year, month and day, and the number of the extracting; then "thick," "thin," or "middling," as the case may be. All barrels of thin honey should be put by themselves; the thick by themselves; the same with the medium in thickness. Now, the honey is in good shape to sell. We know just what is in every barrel; our labels give us the exact quality of the honey, and, for convenience, we have them bunched together according to thickness.

Now, be sure to work off the thinnest honey before the heat of another summer arrives, as thin honey would be likely to sour the next summer. If we happen to have any thin honey it will sell better when it is fresh. If we keep any over until the next season it is of the best and thickest honey; and here let me say that this last season has taught me a good lesson—not to be in a big hurry to sell off a crop of good honey like we had last year. We had 42,000 lbs. last year of the best of honey, and we worked hard to sell it at low figures, and got rid of it at low figures. The same honey, kept until now, would have sold quickly for nearly double the price we got for it. If we have good, thick honey, it will keep, if kept in a dry place, for several years.

EDWIN FRANCE.

Platteville, Wis.

Allen Pringle in L.S. Journal.

### A New Apicultural Journal.

**THE** first number of the *Bee-Keepers' Review*, for January, has been issued at Flint, Michigan, W. Z. Hutchinson being editor and proprietor. This journal is intended for advanced apiarists and specialists rather than amateurs or beginners. The "unsolved problems of advanced bee-culture" will be attended to and the paper will "endeavor to advance bee-culture by increasing the prosperity of existing bee-keepers, rather than by adding to their numbers." Each number will be, as it were, *special*, discussing a particular, timely subject. As it fills a place in apicultural journalism hitherto unoccupied, I beg to extend to it cordial greeting. The first number is well filled and is devoted to a discussion of the question of winter disturbance of bees. The various writers differ somewhat, but the fear of winter disturbance is evidently dissolving in the minds of most of them. There is need here for caution and steadiness. There is a propensity in human nature, when one gets too far one way, to get too far the other way in trying to get back to the truth between. This is exactly the pit into which some of these critics are rushing on this winter disturbance question. The re-action against the non-disturbance theory is about to carry them too far the other way. The truth is between and will stay there. The prevailing conviction amongst experienced bee-keepers that winter quiet is good, and winter disturbance bad is well grounded, and will survive this reaction. But very often the terminology in discussion is the stumbling block. As the "brilliant Frenchman" said to his antagonists, "Define your terms, gentlemen, and I will tell you what I am." What is disturbance? What constitutes disturbance of bees in winter? What amount of disturbance is injurious; and under what conditions does it become injurious and therefore a disturbance? Anything that agitates or excites the bees to the extent of causing them to gorge themselves with food when they would not otherwise do so, I should say amounts to disturbance. Such disturbance might prove injurious to the colony, and it might not, according to the conditions. In a majority of cases under the present modes of wintering, I think it would prove injurious. The exceptions would be in cases where the other conditions were quite perfect, such as perfectly wholesome food, right temperature, humidity, etc. But as we hardly ever know that our bees are in just right conditions in every respect in winter quarters, there is more safety as well as wisdom in not disturbing them. On the other hand, going into the

bee-cellar once in a while to take a quiet peep at the bees either through the entrance or by gently raising the quilt, does not in my opinion constitute a disturbance. This can be done without jarring or agitating them, and need not necessarily prove injurious to the colony, whether the other conditions be right or wrong. The common-sense conclusion is this: When your bees require your attention in the winter, attend to them. If you want to ascertain the temperature of the bee-cellar, or the humidity, or the purity of the atmosphere, or anything else, go and do it. If they require feed, go and feed them, but do everything gently, with as little disturbance as possible.

## QUERIES AND REPLIES.

UNDER THIS HEAD will appear Questions which have been asked, and replied to, by prominent and practical bee-keepers—also by the Editor. Only questions of importance should be asked in this Department, and such questions are requested from everyone. As these questions have to be put into type, sent out for answers, and the replies all awaited for, it will take some time in each case to have the answers appear.

### BEST JOINT FOR HIVES.

QUERY No. 172.—All things considered, which is the best joint for hives, the square, the rabbeted, or the beveled? Of course all the edges fitting flush.

S. CORNELL.—Bevelled.

DR. C. C. MILLER.—Square.

O. G. RUSSELL.—I prefer the square.

G. M. DOOLITTLE.—I use a square joint.

M. EMIGH.—I guess the square joint is as good as any.

PROF. A. J. COOK.—Square. I think the bee-keeper, like every other man, should have everything square and do everything on the square.

H. D. CUTTING.—The rabbeted joint is much stronger. You can nail from each side. It keeps its place better than any of the others mentioned.

ALLEN PRINGLE.—As "all things considered" must of course include expense, I suppose the square joint must bear the palm, but I have a strong leaning to the rabbeted joint.

Is it Advantageous to use Queen-Excluding H.B. in a Contracted Hive?

QUERY No. 173.—If the brood chamber of a top and side storing hive, containing a strong colony, were contracted to six Gallup (11 $\frac{1}{4}$  x 11 $\frac{1}{4}$  inches) frames, (1) Would metal queen-excluding honey

and division-boards be necessary to keep queen from entering surplus boxes? (2) Would said metal honey and division boards have a tendency to prevent pollen being put in sections?

O. G. RUSSELL.—(1) Yes. (2) No.

G. M. DOOLITTLE.—Yes to both questions.

S. CORNEIL.—(1) I never used a frame of just that size, but from my experience with frames 11 inches deep, I think an excluder would be necessary.

PROF. A. J. COOK.—(1) Yes. (2) Yes. The bees usually put pollen only near the brood. I have not had a case of pollen in sections where I have used the Heddon queen-excluding honey-board.

DR. C. C. MILLER.—I have often contracted as much with no queen-excluder, merely Heddon's slat honey-board, and have had no trouble with queens going up or with pollen.

H. D. CUTTING.—(1) If the side frames were full of brood and the sections just put in position I think you would need some arrangement to prevent the queen from using the sections. (2) I think it will have a tendency to prevent.

M. EMIGH.—(1) A good deal would depend on the queen, also on the size of sections, and whether separators are used, etc., and if rightly managed, but few queens would go up. Of course the queen-excluding division-board would make a sure thing of it. (2) Don't know.

ALLEN PRINGLE.—(1) Under certain conditions the queen would be apt to enter the surplus boxes from a brood-chamber the size you mention. I am very much in favor of the queen-excluding zinc, having used it for several years with great satisfaction. I certainly do think it tends to keep the pollen out of the sections.

## SUNDRY SELECTIONS.

### THE BEE-KEEPERS' DICTIONARY.

W. M. BARNUM.—The "Bee-keepers' Dictionary" received. Thanks! It is a neat and valuable little pamphlet and should be in the hands of every live bee-keeper. It is cheap at the price—25 cts.

Anglea, N.Y., March 6, 1888.

### DISTINGUISHING WHAT STRAIN OF DRONES QUEENS MATE WITH.

B. J. Rice.—How can a purely mated Italian queen be distinguished from one mated with a Cyprian or Holy Land drone, or a drone that is a mixture of Italian and one of these races? West Fallbrook, Cal., Feb. 27, 1888.

We hardly think it would be possible to know from the appearance of the queen what kind of drone she had mated with. A close observer could tell by her progeny.

### BEEES COMING OUT OF CLAMPS AT 20° BELOW ZERO.

W. C. LATRAM.—I winter my bees in clamps, as you directed in your pamphlet on wintering in 1882, and I have had good success up to the last winter, when I lost 11 colonies. This winter I put six colonies in clamp in double-walled hives, and they were very quiet until three weeks ago, when the thermometer dropped to 20° below zero, and they got very restless, came out of the hive and died by hundreds. I banked snow up around the hives and shut them in. Can you suggest the cause of their coming out? and say whether the bank of snow will hurt them or not? Cultus, Ont., Feb. 21, 1888.

### A GOOD REPORT.

JAS. B. LEE.—I have read your BEE JOURNAL for the last three years, and I have seen some articles alone that I think are worth the price of the JOURNAL. I packed on summer stands in the fall of 1886 17 colonies; commenced the season of 1887 with 16 colonies, increased to 33. I took 350 lbs. of extracted honey and 122 lbs. of comb honey. I packed my bees on Sept. 18, as I am a believer in packing before the cold nights come. My bees are wintering splendidly. In cleaning out the entrance I find very few dead bees, and they are nice and dry.

129 Sydenham st., London, Ont.

You are right about packing the bees early, it is a good plan. If all bees were packed and prepared for winter a month or six weeks earlier much better results would follow.

### UNSUCCESSFUL BUT NOT DISCOURAGED.

L. W. WENTWORTH.—I began keeping bees two years ago and I have never had one pound of surplus honey from them yet. Last winter I lost all but two swarms and those were not good for much. I bought more in the spring and swarming time until I had seventeen swarms but they have cost me quite a good bit, and in consequence I thought I must stop some of my newspapers until the bees did better, but I concluded to lend the bees 50c. to pay for the JOURNAL six months longer, and if they don't pay me back in that time I shall have to say good-bye to the C.B.J. for a while. I write this simply to let you know that it will be the fault of the bees and not of the JOURNAL. Don't think I am discouraged, for I am not, and never will be if I can learn to winter my bees all right.

Searsport, Feb. 17, 1888.

We feel very sanguine that you will succeed this season as we have never known two bad seasons to come together in close succession. Your determination to succeed simply means success. It is from persons like you that our best bee-keepers spring. Those who are not discouraged on account of failure, but go ahead with a strong determination to win thoroughly studying the subject, soon become masters of the situation. We shall be pleased to give you such instructions during the summer

and autumn as will enable you to winter your colonies successfully.

**BROOD WITH OPENINGS IN THE CAPPING.**

**GEORGE ROGERS.**—In the fall of 1886 I had one colony of bees that did not cap their brood quite over. There was a small opening in the centre varying in size from a pin point to a pin head, so that I could see the heads of the young bees from the first capping until the gnawing out. The colony came through the following winter all right but was a little light in spring. There was brood, however, that was capped all right.

Hollin, Feb. 4th, 1888.

It is very hard to say the reason for what you have stated. Bees are like human beings, they will at times do very curious things. We have known colonies before which refused to cap their brood entirely over. Perhaps the young bees in the hive had the contract, and like many a human contractor, they got exceedingly tired and went on strike. It is not an unusual occurrence, yet there does not seem to be anything objectionable, as the brood hatches out all right. Let us have little items of importance from you every time you write us, whether they be in pen or pencil it will receive every attention and we shall be glad to have them.

**CLEANSING FLIGHTS.—EXAMINING BEES BY LIFTING COMBS DETRIMENTAL.**

**WM. H. MOORE.**—As I have not reported since I commenced bee-keeping I thought probably I could let my light shine a little through the columns of your valuable paper. I commenced in 1886 with two colonies, increased to six and got about 75 lbs. of nice comb honey. Lost one in the spring of 1887, then I bought three more and increased to 28, but a few of them were weak and I reduced them to 25 pretty fair colonies and got about 350 lbs. of comb honey. Bees appear to be doing well so far; they had a good cleansing flight. Feb. 24 I examined those packed in chaff hives, and found very few dead bees, and they appeared very nearly as strong as when first packed. Did I do right in examining them to see if they had plenty of honey? I had 19 in a bee-house that was built on purpose for bees. It is packed with saw-dust two feet all round and has an underground ventilator 100 ft. long, size 6x8 in. The temperature stands at about 50°. Could I examine those to see if they have plenty of honey?

Pelham Union, Ont., March 1, '88.

If you made the examinations very carefully, and did not handle the frames over, the work might be done all right, but we cannot recommend handling too much. By peering down between the combs you could tell how their stores were, and whether there was likely

to be enough. It is a fatal policy to break the cluster, and disturb them unnecessarily.

**A DRONE LAYING QUEEN.**

**JOHN WALKER.**—Our bees did very well last season, but the flow of honey only lasted till about harvest. We let them swarm once; did not take as much honey from them as other seasons. Put 13 hives in the cellar the beginning of November, and so far they appear to be doing very well. I got a \$2 queen from you the beginning of last June; we took an old queen out of a hive and put her into another one. We took the box your queen came in, took the pin out, and filled the hole with comb and put it between the racks of the hive that we took the other queen out of. We looked a few days after and she was out. They swarmed once and got to be almost half drones, which we had to kill off. Some time after this we examined the hive again and found a small young queen. They did very little good, if any at all, that we know of, all summer.

Moorefield, Ont., Feb. 14, 1888.

The queen we sent you was evidently killed. The fact of your finding small drones in the hive was ample proof of that we think. Very frequently if there is not a close examination made when queens are liberated, the colony may be queenless without the knowledge of the owner, and even the presence of eggs to an inexperienced person is no proof of the queen's presence, as worker bees will lay eggs very soon after the queen has been destroyed, feeling that they are queenless and without the means to raise one. Fertile workers sometimes start, but the body of the worker being smaller than that of the queen, it is more difficult for her to get her abdomen low enough in the cell to lay the eggs in the bottom or septum. She sometimes lays them in the sides of the cell, and a little above the septum. The little queen that you found may have been hatched from a worker larvæ too old to become a perfect queen, such queens are apt to deceive. This same queen may have laid the eggs that produced the little drones. It is not unusual for queens to lay before they become fertilized, and especially if they are long in becoming so. Often queens are superceded in winter, early spring or late in the autumn when there are no drones; such become drone laying queens, and very small queens hatched from old larvæ frequently turn out the same. It appears as if Nature in her efforts to prevent in-breeding had given the small

imperfect queens a strong aversion to the opposite class and *vice versa*. In our earlier experience in bee-keeping we have introduced queens and even examined them, only to find them all right after several days. Then our next examination would find them absent. We have often been disappointed and it requires close attention and careful handling on the part of the beginner or he may meet with similar losses.

#### FEEDING IN WINTER.

T. A. WILLITS.—Please send me at once a winter feeder made up. I have seven colonies of black bees in old box hives, shall transfer them in the spring. Am wintering in cellar, but am afraid it is too cold for them. Thermometer ranges from 35° to 17° according to the weather. Have only had it as low as 17° once, and it was then 30° below outside. In one hive the bees are dying in large numbers (just removed a quart of dead ones) and the cluster hangs down to the bottom-board so that bottom of cluster touches the dead bees. In one hive there has not been over a dozen dead bees on the bottom-board all winter; the others have some but nothing to compare to first mentioned hive. Was told by a friend to raise hives from bottom-board with a couple of blocks an inch thick. Have been like this for six weeks, but think it lets in too much cold. Have decided to shut them down tight, of course leaving entrance open. Do you think your winter feeder can be used successfully on top of these hives? You might give me a pointer in C.B.J.

48 Elgin St., Ottawa, Feb. 8, '88.

The winter feeder may be used on top of any hive. You could just put a cloth or quilt over and around it to prevent the escape of heat. If there are no holes in your old box hives on top to let the bees up with the feeder, you would have to bore a few, in fact it would be better to bore out a piece about 4x6 inches to give them plenty of room to cluster up into the feeder, and if your colonies all want feeding it would be better to have a feeder for each one, because winter feeders are intended, as you will observe by the back numbers of the C.B.J., to go on top of colonies to allow some or all of them to cluster in the feeder and just consume the food as they require it thus preventing any excitement which would tend to make them gorge themselves with stores and become affected with dysentery. If they only required a little food perhaps our improved entrance feeder would do to set on top partially filled with liquid food.

#### LAST SEASON IN WISCONSIN.

WM. B. CHEESEMAN.—My bees did pretty well

this season considering the forest fires in the spring which burnt nearly everything in the woods. Then a bear came and visited two swarms. Bees did not gather any surplus until August. Took after August 20th 515 lbs. in 1-lb sections of honey. Had eight swarms in spring, put twenty-two in cellar this fall, three went to the woods, lost one by grubs and one was robbed. Country being new bees have to depend on the forest for supplies. Seeded about ten acres to Alsike clover last spring and am in hopes they will do better next season. Honey worth from 18c. to 20c. per lb. here; sold what I could spare at that price. I make this statement to let you know what bees did up here, pretty near the jumping off place of Wisconsin.

Sturgeon Bay, Door Co., Wis.

Why, friend Cheeseman, you have done splendidly and have no reason to complain. You had a much better yield than many and larger increase. Your locality must be an extra good one, or the season better there than in most places, besides the price you got astonished us. Now that just shows what honey can be sold at in places, while people are over-stocking the market and selling at a very low price. Tell us how your alsike clover produces next season, and you say there is so much timber land burnt over, which ought to be a grand place to sow bokhara clover, viper's bugloss, Chapman's honey plant, catnip, motherwort, etc., that would give you an almost continuous yield. By the way why not scatter a few bushels of alsike clover seed on the burnt land surrounding the apiary.

#### EXAMINED HIS BEES IN WINTER.

SUBSCRIBER.—I purchased a hive of bees from a gentleman two years ago and last year they swarmed twice and I bought three Italian queens from your firm and introduced them. Upon examining I found but two queens, however, I risked the other thinking that the queen which was in the hive originally had been killed. I, therefore, introduced the third Italian queen but I found that the original queen was still in the hive and the Italian just introduced was killed. The other two colonies did well. I have them now in double walled hives. During the fall the strongest colonies seemed to be robbing the weaker ones. I therefore shut the entrance up to two bee-space, but they still kept on robbing, and when putting the weak colonies into winter quarters I observed that they were short of stores, although I had given them several frames of honey and of brood. I have a house 12x14 ft. double boarded and filled in with dry sawdust to the thickness of four inches. The ceiling is also covered with sawdust. I have two doors forming a dead air space. About the middle of February I looked into the house and found that both the Italian queens were dead. The queen in the other colony was alive and strong. I

bought nine colonies from Mr. James Pickard, of Edmonton. They are all in the old fashioned boxes and so far are all seemingly strong. How can I transfer them in the spring, and can I use the combs which are in the hives in which the bees have died? I did not get much honey last year, my principal object being to build up into good strong colonies. If all is well for the coming season I intend to put on the super and pack it with chaff; I shall also pack around the sides of the hives with chaff. I attribute the death of the two colonies to the cold. I will advise you how the others come out in spring. About the 22nd of February some of the bees were very anxious to get out and the house was evidently too warm, and to cool it down I opened the door at night and closed it before daylight. I find that they are keeping fairly quiet just now. In setting out colonies should I put them directly on their summer stands, or would it be well to give them a cleansing flight and remove them back to the bee-house until warmer weather?

You should have examined the bees more closely before introducing the third Italian queen. It is tolerably difficult to find black queens without removing the combs. Probably the best method of finding her is to take out the frames and shake the bees down into the bottom of the hive as quickly as possible, placing the combs off which the bees have been shaken into another hive, then give the bees a jar towards the rear of the hive and the queen will run forward much faster than the others and can easily be picked up by the wings. In this way you can find the queen in a very short time. Do we understand you to say that you examined the hives in February to see whether the queens were alive or not? We do not wonder that you found them dead. If we attempted to disturb the bees in winter in that fashion we would expect to find every queen dead, as the bees would attack and sting her to death in all probability before we could reach the part of the hive where she happened to be. Do not think of handling your bees in winter. We hope that the rest of your colonies may pull through all right. Opinions are divided as to the advisability of using old combs. We do not see any bad results to be obtained from the use of combs on which the bees have died, and we think you might transfer your bees on to these frames. When you set the bees out in spring put them directly on their summer stands. Should the weather turn cold you might put them back in the bee-house again until it moderates.

### CIRCULARS RECEIVED.

Martin & Macy, North Manchester, Ind., bee-keepers' supplies, poultry and poultrymen's supplies.

The Bee-keepers' Advertiser, an annual, sent out by Wm. Hough, Ripley Me., contains advt's of various supply dealers and some practical articles.

Thos. B. Blow, Welwyn Herts, Eng.—64-page catalogue of all the appliances of British bee-keepers.

A. Gilchrist, Elora Road, Guelph, P.O.—catalogue of evergreens, roses, climbers, plants, etc.; 14-pages.

Wm. E. Gould, Freemont, Mich. Bees, queens, and supplies.

Frank A. Eaton, Bluffton, O.—Specialties in surplus cases.

D. C. Buck, Dundee, Mich.—Italian queens, nuclei, etc.

## THE CANADIAN BEE JOURNAL.

THE D. A. JONES Co., Ltd.,

— PUBLISHERS, —

D. A. JONES,  
Editor  
and President.

F. H. MACPHERSON,  
Asst. Editor  
and Business Manager.

WEEKLY, \$1.00 per Year, Postpaid.

BETON, ONTARIO, MARCH 14, 1888.

### BUSINESS DEPARTMENT.

Our "Sundries" department, though only in going order for a week or two, has proved a decided success. We are getting good orders every day.

Our circulation is increasing steadily and we hope that during the coming season we shall make the JOURNAL of still more practical value than heretofore.

The section trade seems to be growing apace. Up to this date we have had orders for nearly double our last year's trade to the same period. We never had as fine a lot of beautiful white basswood in stock as at the present time, and our best trained hands are kept on the section machines.

If you want anything in the line of notions, such as we have given in our list at the end of JOURNAL, we shall be glad to supply you. The prices, in most instances, are away below the usual retail figures.

Remember that we are now able to furnish you with Barnes' Foot Power Machines, at the very lowest figures obtainable, and we shall be glad to have your orders. One customer, who has had one of the combined machines for about three months, says that if another could not be obtained, he would not part with his machine for \$200. The complete machine cost him \$60.

We can supply 250 envelopes and 250 note heads, each with your name and business neatly printed on the corner for one dollar. The paper is of good quality, the envelopes are in boxes of 250 and we pay the postage. At this writing we have executed nearly three hundred orders, and have in many cases been favored with repeat orders for friends. Cash should accompany order and copy be plainly written.

Our plan of sending out notices to those whose subscriptions expire from time to time, a week in advance, is a splendid thing and we find meets with general favor. Most all of them renew, and in cases, where the subscriber wishes his JOURNAL discontinued, we have only to receive a card to give effect to his wishes. We have said that "most all of them renew" but still there are some who do not, neither do they order a discontinuance. This is all right, but in such cases, wouldn't it be much nicer for us to receive a card something like this: "Please send on the BEE JOURNAL, I know my time is up, but I'll remit pretty soon." How much better it would make us feel, and at what a small cost to yourselves.

#### BEE-KEEPERS' CIRCULARS.

During last season we printed quite a large number of catalogues and price lists for bee-keepers, and we believe that in every instance the work as well as the price gave satisfaction. We have much better facilities now than we had at that time for turning out work, and we shall be happy to quote prices to any who may be requiring circulars. All we want is the privilege of estimating, and we will then leave the matter with the customer. We generally get up a sample circular (in blank form) showing the style and quality of paper which we quote price for, and we always allow the free use of any cuts or illustrations which have ever appeared in either the C.B.J. or our catalogue. Give us an idea of what you want and we will try and send a sample of it with prices. ff.

#### QUEENS.



Our trade in queens grows greater each succeeding year, and we seem to be giving better satisfaction as well. We endeavor to raise

queens which will produce good honey-gatherers irrespective of breed or race.

We pay much attention to the class of drones with which our queens come in contact.

The annexed table shows the prices at different seasons, of different varieties. These are, of course, subject to change depending upon the supply and demand. All changes will be noted in the CANADIAN BEE JOURNAL:

MONTH.	Untested	Tested	Selected	Virgin
May	1 50	2 50	3 00	
June	1 00	2 00	3 00	0 60
July	1 00	2 00	2 50	50
August	1 00	2 00	2 50	50
September	1 50	2 00	2 75	
October		2 50	3 00	

Three at one time, deduct 10 per cent; six at one time, deduct 20 per cent.

#### EXPLANATIONS.

We are not, owing to our high latitude, able to sell queens before May, nor later than October.

Untested queens will be ready for sale as soon as mated, and before they have had a chance to prove themselves.

Tested queens are those which have been proven as to race and honey-gathering qualities.

Selected queens are chosen because of color, size and honey-gathering qualities.

Queens cannot be shipped unless the weather is warm enough, except at risk of purchaser—otherwise safe delivery is guaranteed.

We replace all queens lost in transit, but not those lost in introducing.

#### BEEES.

Bees should always go by express, unless they are personally cared for *en route*.

We do not hold ourselves responsible for breakage or delay in transit of colonies of bees; they always leave our hands in good shape. We will send out only such colonies as we are sure will give satisfaction. Our bees will be such as the queens we offer will produce.

MONTH.	Italian	Italian Crosses	Carrollian Crosses
May	\$8.00	\$ 8.00	\$ 9.00
June	7.00	7.00	8.00
July	7.00	7.00	8.00
August	6.50	6.50	7.00
September	6.00	6.00	65.0
October	6.50	6.50	7.00

The above prices are for up to four colonies; five colonies up to nine, take off 3 per cent.; ten colonies up to twenty-four, 5 per cent.; twenty-five colonies and over, 10 per cent—*always cash*. Bees at these prices will always be sent out in the Combination Hive, and each colony





# USEFUL GOODS.

The following is a partial list of small wares, tools and stationery, which we carry in stock. Additions are constantly being made. We buy in very large quantities, and are therefore able to quote rock bottom prices. There is always something in these lines you want and they can be enclosed with other goods or sent by mail. The amount of postage is marked opposite each article, except those excluded from the mail.

Postage.		Per 10 lots.	Per 25 lots.
2	Clips for holding letters, etc...	90	2 00
	Due bills, 100 in book with stub	85	1 80
2	Envelopes, 3 packages, white, good, business.....	95	
2	Files, 3 cornered, 5 inch.....	90	2 10
3	Lead pencils, 1 doz. plain cedar Fabers 581.....	90	
2	Lead pencils 3 red and blue....	90	
2	Note heads, pads of 100 sheets..	90	
	Paint brush, No. 7.....		
2	Pocket note book, 3x5 in., 125 pages, stiff cover with band grand value.....	90	
1	Rubber bands, five, large.....	80	
1	Ruler, brass edged, flat, hardwood, bevelled, graduated to $\frac{1}{4}$ inch.....	95	2 25
4	School bag, medium size.....	90	2 10
	Tacks, cut, 3 packages, 4 oz....		

## 13 CENT ARTICLES.

2	Belt punches, Nos. 2, 3, 4, and 5	1 25	\$3 00
	File, 6 inches long, flat.....	1 25	2 00
	" 5 " " round.....	1 25	2 90
	Slice knives, 4 inch blade.....	1 20	2 75

## 15 CENT ARTICLES.

	Chisel, firmer, $\frac{1}{2}$ and $\frac{3}{4}$ in.....	1 45	
12	Dextrine, $\frac{1}{2}$ lb. pkg. for pasting		
	Hammer, iron, adze eye.....	1 45	
3	Lead pencils, 1 doz., good quality, Faber's 971.....		
5	Note paper, 5 quires, 3 lbs., extra value.....	1 40	3 35
	Paint brush, No. 5.....		
6	Rubber bands in gross boxes. For quince nursery.....	1 30	
4	Rule, 2 foot, a splendid line....	1 40	3 40
	Screw driver, 5 inch, round bit, hardwood handle.....	1 40	
2	Statement heads in pads of 100	1 20	
	Tack hammers, magnetic.....	1 40	3 30
12	Papeterie, 24 sheets fine note paper and 24 square envelopes in neat box.....	1 40	3 35

## 18 CENT ARTICLES.

	Bit, best make, $\frac{1}{8}$ , $\frac{1}{4}$ , $\frac{1}{2}$ .....	1 65	4 00
	Glue, LePage's liquid, with brush	1 65	
	Oilers, automatic.....	1 60	

## 5 CENT ARTICLES.

Postage.		Per 10 lots.	Per 25 lots.
3	Awls, brad, three assorted without handles.....	\$ 75	\$1 00
1	Blotting paper, 10 sheets note size.....	40	88
3	Bag for school books.....	45	1 05
2	Brush, round, for paint, paste or varnish.....	40	95
1	Chisel handle.....	45	1 10
8	Crayons, colored drawing.....	45	1 00
1	Eraser combined ink and pencil	45	
1	Letter openers, nickel plated, very handy.....	40	
1	Memo books, 32 pages, stiff cover.....	40	90
	Note paper, 1 quire, extra quality, ruled or plain.....	40	80
1	Pad 100 sheets scribbling paper	45	
1	Pass books 3 "Railroad" 16 p. paper cover.....	45	1 00
1	Pass books, 2 Steamboat 32 p p.	45	1 00
1	Penholders 2, cherry, swell....	40	
1	Ruler, hardwood, flat, graduated to $\frac{1}{8}$ , bevelled.....	45	1 05
1	Ruler, for school children, three for 5c.....		
2	Scribbling books, 200 pages....	40	90
	Tacks, cut, 2 papers 1, 2 or 3 oz.	45	

## 8 CENT ARTICLES.

	Butter stamps 3 or 4 inches....	\$ 75	\$1 75
	File, 3 corner, 3 or 4 inches....	75	1 75
	Ink-well, glass, safety, cannot spill.....	65	
	Mucilage, good sized bottle....	70	
	Oil cans, zinc.....	65	
1	Pencil, automatic indelible....	75	1 75
1	Time books for week or month.	75	

## 10 CENT GOODS.

	Bill fyles, harpshape.....	\$ 90	2 10
2	Book of 50 blank receipts with stub.....	85	2 00
2	Book of 50 blank notes.....	85	2 00
2	Brush, flat, for paint, paste or varnish.....	80	1 90
3	Butter spades 9c. each.....	80	1 90
2	Boxwood pocket 1 foot rule....	90	2 10
	Chisel, firmer $\frac{1}{4}$ inch.....	90	

**20 CENT ARTICLES.**

Postage.	Per 10 lots.	Per 25 lots.
Bit, best make, $\frac{3}{8}$ , 7/16, $\frac{1}{2}$ , 9/16..	1 90	4 50
Brass traps.....	1 80	4 50
Brushes, flat, 2nd quality, 1 $\frac{1}{2}$ in. paste or varnish.....	1 80	4 25
Chisel, firmer, inch.....	1 90	
Ebony ruler, bevelled for book-keeper.....	1 90	4 50
File, 8 inch, flat, round or 3 corner.....	1 90	
3 Lead pencils, 1 doz. 201 good value, rubber tipped.....	1 80	
Paint brush, No. 3.....		
12 Papeterie, "Jubilee" containing 24 sheets, ivory notes, 24 square envelopes.....	1 80	
6 Pens, gross box "292 school"....	1 80	
1 Pocket memo book, indexed....	1 90	
Screw-driver, steel, 6 inch rd bit	1 90	
Square, iron, grad. to $\frac{1}{2}$ one side	1 90	
Thermometer.....		

**25 CENT ARTICLES.**

6 Cards, 50, ladies' or gents' visiting. Piries' super ivory...	2 00	4 50
Duplicate order books, with black leaf.....	2 00	4 50
File, 10 inch, flat.....	2 25	
3 Lead pencils, 1 doz. Faber's H, H. B., B. or B. B.....	2 30	
Paint brush No 1.....		
Rule, 2 foot, boxwood.....	2 30	

**30 CENT ARTICLES.**

3 Bills payable and receivable....	2 85	6 90
Bits, best make, 10/16, $\frac{3}{8}$ , $\frac{1}{2}$ .....	2 85	6 90
5 Foolscap, 2 quires, extra quality	2 80	
4 " legal, in pads of 100 sheets.....	2 75	6 00
Inkwell, square, glass, bevelled edges.....	2 75	

**35 CENT ARTICLES.**

Bit, best make, inch.....	3 40	8 20
Hammer, steel face, for light work.....	3 30	
Square, grad. to 1/16 both sides	3 30	

**40 CENT ARTICLES.**

Foolscap, 5 quires, good quality	3 75	
Hammer, No. 50, steel head, adze eye.....	3 60	
6 Pens, gross box, 'Bank of Eng.'	3 80	
" " Blackstone or J.	3 80	
Ruler, 2 foot, boxwood, brass bound.....	3 60	

**50 CENT ARTICLES.**

5 Binders, CANADIAN BEE JOURNAL	4 80	
Blank books—.....		
Day book, 200 p. p. good paper, well bound.....	4 25	

Postage.

	Per 10 lots.	Per 25 lots.
Cash " " " "	4 25	
Ledger " " " "	4 25	
Minute " " " "	4 25	
Complete set, Cash, Day and Ledger, \$1.25.....		
Carpenter's brace, pat. grip, 8 in	4 85	12 00
Envelopes, good, business size, 250 in box.....	4 00	
Hand saws, 18 and 20 in., best make.....	4 50	
Hammer, No. 51, steel head, adze eye.....	4 50	
Hammer, smaller, frame nail'g	4 50	

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Automatic Fountain Pen, the finest thing out; holds enough ink to last a week; always ready; can use any style of pen that suits you, and can change it as often as you wish—a marvel of cheapness—by mail, post paid, each..... 75



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Letter books, with index, bound in canvas, 500 pages..... 1 10  
Letter books, with index, bound in canvass, 1000 pages..... 2 00  
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Post cards printed to order, 50 \$1, 100 1 40  
Square, steel, grad. both sides, usual price, \$1.75..... 1 35

# TOOLS For BEE-KEEPERS

## HAMMERS.

We shall hereafter keep in stock a full line of tools suitable for bee-keepers. For ordinary use, where a person has only a few hives, etc., to nail, we have an iron hammer (with adze eye) which we can send you at 15 cents.

Then in steel hammers we have three styles all with adze eyes, which we sell at 40c., 50c., and 60c each.

Small hammers—steel face with adze eyes, just what are needed for frame nailing, etc., No. 55, 35c.; No. 52, 50c.

## SCREW DRIVERS.

With good hardwood handles and of the best steel—nicely finished, round bits, in two kinds, No. 1, 5 inch bit, 18c.; No. 2, 6 inch bit, 20c.

## TWO-FOOT SQUARES.

In iron squares we have two kinds—the first of these is marked down to one-eighth of an inch, and is marked on one side only, the price is, each, 20c.

The other style is marked on both sides down to one-sixteenth of an inch—price, each, 35c.

We have a splendid line in steel squares which we can furnish you at \$1.35. They are well finished and are usually sold in hardware stores at \$1.75.

## TWO FOOT RULES.

A splendid line in rules we offer at, each, 18c. Then we have a nice box-wood rule at, each 25c.

## HAND SAWS

Just at the present we have but one line in these—26 inch long—A. & S. Perry's make—usually sold at 75 cents we offer them for 55c.

## PANEL SAWS.

These are what are often called small hand saws, and for the finer classes of the bee-keepers work are indispensable. We have started out with two lines in these. The 18 inch are of good steel (Shirley and Dietrich) and can be sold by us at 50c.

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## PLANES.

Iron block planes, just the thing for dressing off hives, each, 75c.

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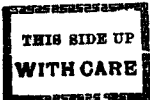
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Each.....\$ 0 50  
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